Guide to Test Interpretation



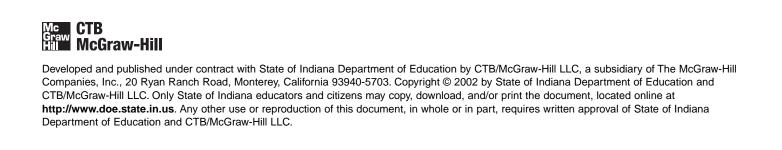
Graduation Qualifying Exam Grade 10 and Retest

November 2002

School Year 2002-2003







A Message from Dr. Suellen Reed

November 2002

Dear Educators:

The *Guide to Test Interpretation* is designed to help you evaluate *ISTEP*+results, explain the results to parents, and evaluate local program offerings based upon *ISTEP*+ results. At the individual student level, *ISTEP*+ results should be used to identify students' strengths and weaknesses in English and mathematics. On building and corporation levels, the reports should be used to evaluate local curriculum choices and the instructional strategies that are employed by teachers in classrooms.

In addition, the results can help you assess the effectiveness of local program offerings as they relate to remediation and prevention activities in the areas of English and mathematics. The information the results provide can be very valuable in your efforts to build stronger connections between curriculum, instruction, and assessments.

Now, more than ever, with the adoption of new, more rigorous standards in the areas of English/language arts, mathematics, and science, it is critical that test results are used responsibly with the goal of helping each child achieve his or her full academic potential. I urge you to work within your school community to help increase the level of understanding and knowledge about test results and the importance they have to individual students and the K–12 education system.

The new education accountability system (P.L. 221) will emphasize test scores and other data measurements more than ever in Indiana's history. I urge each of you to analyze *ISTEP*+ results carefully and act in a proactive manner as we all work to build upon the many areas of improvements we have gained over the past several years.

Sincerely,

Dr. Suellen Reed

Superintendent of Public Instruction

Dr. Suellen Reed

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NOTE: New *ISTEP*+ tests that are aligned with the Indiana Academic Standards were administered in fall 2002 at Grades 3, 6, and 8. Reports for these grades will be generated after the Standard Setting meeting scheduled in January 2003. Thus, for this year, a separate *Guide to Test Interpretation* has been created for Grade 10 only. The *Guide to Test Interpretation* for Grades 3, 6, and 8 will be sent with score reports in February 2003.

Understanding ISTEP+ Test Results

ISTEP+ report forms

This guide will help you understand *ISTEP*+ test results and report forms in order to apply the results toward the goal of improving educational opportunities for students. This guide will also help you to be better prepared to answer questions from parents, students, and other members of the educational community regarding *ISTEP*+ results. Toward this end, a Sample Letter to Parents is included at the end of this guide for your use.

Each *ISTEP*+ report is designed to present clearly the information most useful to you and to parents. The audience and student populations included in each of the *ISTEP*+ reports are listed below.

ISTEP+ Report Information										
Report	Number of Copies	Student Population	Student Population	Student Population						
For Teachers										
Student Report	2	✓	~	/						
Proficiency Roster	1	~	~	~						
Class Essential Skills Report	1	~	~	V						
Undetermined Status Roster	2	/	/	V						
ISTEP+ Label	1	✓	~	V						
NRT Student Report	2	✓	~	V						
Class Record Sheet with TCS/2	2	✓								
For School Administrators										
Proficiency Roster	1	~	~	/						
School Proficiency Performance Summary	1	~	~	V						
GQE Required Retest List	1	/	~	V						
Disaggregation Summary Report	1	/	/	V						
Graduation Test Labels	1	/	/	V						
Applied Skills Frequency Distribution	1	/	~	<i>'</i>						
Evaluation Summary Report with TCS/2	1	V	·	-						
For Corporation Administrators										
Proficiency Roster (school)	1	~	~	/						
School Proficiency Performance Summary	1	✓	✓	/						
Disaggregation Summary Report (school)	1	✓	✓	~						
Corporation Proficiency Performance Summary	2	✓	✓	~						
Essential Skills Summary (corporation)	2	✓	•	~						
Group Essential Skills Summary (corporation)	2	✓	•	~						
Disaggregation Summary Report (corporation)	2	~	~	V						
Applied Skills Frequency Distribution (school/corporation)	1 each	~	~	/						
Undetermined Status Roster	1	~	•	/						
Academic Standards Frequency Distribution	1	~	~	~						
Evaluation Summary Report with TCS/2 (school)	1	✓								
Evaluation Summary Report with TCS/2 (corporation)	2	✓								

- A Regular Education students and those Special Education students determined by their case conference committee to be fully eligible for the *ISTEP+* program.
- **B** Population **A** students who have been administered the assessments with special accommodations.
- Retest Population—Scores are aggregated separately from all other students.

Students must be administered the sections of the Graduation Qualifying Exam (GQE) Basic Skills test and the Applied Skills I test that relate to the content areas (English/language arts and/or mathematics) in which they are testing.

Note: Failure to return both the completed Basic Skills and Applied Skills I documents will result in a student receiving a status of UNDETERMINED on the GQE Retest.

Copies of student answers to the constructed-response items, as they appeared in the Applied Skills I test books, will be returned to the teachers for their assistance in reviewing the students' performance. The teacher may use these papers, in conjunction with information in the *Teacher's Scoring Guides*, to assist in further evaluating a student's strengths and needs. A copy of the Student Report will be included in the package with the student responses.

The *ISTEP*+ score reports are packaged by class and school, and they are shrink-wrapped to prevent damage during handling. Student reports for Braille tests are shipped separately.

Before you can interpret and apply the information in the reports, you must understand the meaning of the scores presented. If you are unfamiliar with *ISTEP*+ or with testing and scoring terms, please read the next four sections carefully. If you need just a quick review, skim the glossary at the end of this guide.

When you are confident in your understanding, read the section that describes how to interpret *ISTEP*+ reports and how best to apply test results in your job.

Note: For *ISTEP*+ Fall 2002, the administration of the NRT and TCS/2 was optional at all grade levels. Please keep in mind when reviewing reports whether or not your corporation administered these tests.

The ISTEP+ Testing Program

What can you learn from *ISTEP*+?

Taxpayers, parents, and educators ask many questions about instructional programs as Indiana strives to build a brighter future by providing the best possible education for its young people. Questions such as the following are commonly asked:

"Are all of our students attaining the skills they need to succeed?"

"What kind of individual instruction would help my child?"

ISTEP+ provides information that will help you answer such questions and support the instructional choices you make for your students. *ISTEP*+ reports can quickly show you the following:

- To what extent an individual student has mastered Essential Skills in the English/language arts and mathematics content areas.
- To what extent the students in your classroom, school, and corporation as a group are attaining mastery of Essential Skills.
- Where the students in your class, school, or corporation are relative to the Indiana Academic Standards established by the State Board of Education. See pages 11 through 13 for a discussion of criterion-referenced scores.

In addition, corporations have the option to administer a norm-referenced test as part of *ISTEP+*. The norm-referenced scores compare student performance with that of other students nationwide. They show where students stand in relation to their peers. See pages 14 through 17 for a discussion of norm-referenced scores.

The ISTEP+Testing Program

The following table lists the *ISTEP*+ reports and the type of score each provides.

IOTED D	ISTEP+ Results by Report					
ISTEP+ Reports For Teachers	Criterion-Referenced Indiana Academic Standards Scores	Norm-Referenced National Achievement Scores (Optional)				
Student Report	·					
Proficiency Roster	✓					
Class Essential Skills Report	V					
Undetermined Status Roster	V					
ISTEP+ Label	V	<i>V</i>				
NRT Student Report		V				
Class Record Sheet with TCS/2		V				
For School Administrators						
Proficiency Roster	V					
School Proficiency Performance Summary	V					
GQE Required Retest List	V					
Disaggregation Summary Report	V					
Graduation Test Labels	V					
Applied Skills Frequency Distribution	V					
Evaluation Summary Report with TCS/2		V				
For Corporation Administrators						
Proficiency Roster (school)	V					
School Proficiency Performance Summary	✓					
Disaggregation Summary Report (school)	V					
Corporation Proficiency Performance Summary	·					
Essential Skills Summary (corporation)	✓					
Group Essential Skills Summary (corporation)	V					
Disaggregation Summary Report (corporation)	V					
Applied Skills Frequency Distribution (school/corp)	V					
Undetermined Status Roster	V					
Academic Standards Frequency Distribution	V					
Evaluation Summary Report with TCS/2 (school)		· ·				
Evaluation Summary Report with TCS/2 (corporation)		V				

Criterion-Referenced Scores

What is a criterionreferenced score?

Criterion-referenced scores indicate where a student stands in relation to the established Indiana Academic Standards, as well as relative to Indiana's Essential Skills. The most valuable application of criterion-referenced information is to identify a student's strengths and needs and to plan appropriate instruction.

Criterion-referenced scores are presented by Essential Skills within each content area, as follows:

Criterion-Referenced Score Categories										
Domain	English/language arts Mathematics									
Essential Skills	10.1 Construct Meaning 10.2 Compare/Predict	10.1-3 Probsolv/Comm/Reas 10.4 Algebra								
	• •	:								

Indiana Academic Standards

To promote student academic achievement, the State Board of Education has adopted challenging standards. A student who scores AT or ABOVE the Indiana Academic Standards in English/language arts or mathematics demonstrates the mastery of these standards. A student who scores BELOW the Indiana Academic Standards may require remedial assistance in order to be successful at the current grade.

In addition, an UNDETERMINED category is reported for any student whose *ISTEP*+ scores for English/language arts and/or mathematics are incomplete (i.e., all or part of a test was not taken or was considered invalid by the examiner). The phrase "did not retest" will be used to identify content areas not attempted by students during the GQE Retest.

Criterion-Referenced Scores

Essential Skill scores

Indiana's Essential Skills are listed by subject on the Student Report, the Class Essential Skills Report, the Essential Skills Summary and the Group Essential Skills Summary.

The Indiana Performance Index (IPI) is used to indicate a student's performance on the Essential Skills. This is a statistical value which reflects the number of items a student would have answered correctly if the student had responded to 100 items like the ones actually on the test. It is a better measure of the student's performance than a simple percentage of correct answers to a small number of questions.

On the Student Report, next to each Essential Skill, the student's Skill Score is shown, along with the Passing Skill Score for a student at the standard, and the difference between the two scores.

The Class Essential Skills Report indicates whether students have mastered each Essential Skill. Symbols appear on this report indicating: 1) mastery, 2) nonmastery, 3) if there were too few score points to assess mastery conclusively, and 4) if a subtest was omitted or invalid. Mastery of an Essential Skill indicates that the student achieved an IPI that is equal to or greater than the IPI for a student at the standard.

The corporation Essential Skills Summary provides a summary of students' performance for all schools in the corporation.

Note: All sample reports shown in this guide contain simulated data only.

Item Response Theory

Item Response Theory (IRT) refers to the theory underlying a family of statistical models. These models describe the behavior of test questions and examinees. For the *ISTEP*+ tests, two models are used. One is used for the multiple-choice test questions, and another is used for the constructed-response test questions.

The two models are used in combination with test data to characterize test questions and generate student scale scores. Both models use the data to determine how difficult each test question is and how well each question accurately identifies students who do and do not have the skill being tested by the questions. The multiple-choice model also describes the degree to which students can guess the correct answer to each question.

The statistical characteristics of the test questions can affect a student's total test score (scale score). The correct answer to a question that accurately identifies skilled students typically will carry more weight than the correct answer to a question that does not discriminate as well between students' skill levels. Greater weight is given to a more discriminating question because it is a better measure of the skill.

Criterion-Referenced Scores

The combination of test questions that students answer correctly can also affect their scale score. Let's say that both Student A and Student B correctly answered 9 out of 20 test questions. Of the nine questions, Student A correctly answered six that were easy and three that were hard. In contrast, Student B correctly answered nine easy questions. It is likely that Student A would receive a higher scale score than Student B because he or she correctly answered a few more difficult questions. Therefore, Student A would be estimated to be slightly more knowledgeable than Student B.

Sample Letter to Parents

To help the teacher explain the *ISTEP*+ reports to parents, a Sample Letter to Parents is provided at the end of this guide. You may duplicate or edit the letter to make it appropriate for your use.

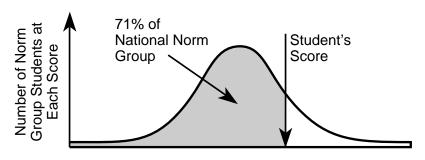
What is a normreferenced score?

A norm-referenced score derives meaning through comparison of the test performance of an individual or group with the performance of a norm group. The national norm groups are composed of a sample of students representative of the nation. The groups are formed of students from diverse geographic regions who live in different types of communities and attend schools of varying sizes.

Norm-referenced scores can be expressed in a number of ways to assist in the comparison of student performance. Similar to multiple cameras at a sporting event, each score contributes a slightly different perspective and is generally best suited to specific purposes. The norm-referenced scores presented on *ISTEP*+ reports are (1) national percentile rank (NP), (2) normal curve equivalent (NCE), (3) grade equivalent (GE), (4) anticipated achievement normal curve equivalent (AANCE), and (5) cognitive skills index (CSI).

National percentile ranks

National percentile ranks compare the scores of an individual student or a group of students with the norm group (or "national average"). A national percentile rank (NP) indicates the percentage of students in the norm group whose scores fall below a particular student's score. For example, if a student's NP is 71, it means that the student scored higher than 71% of the students in the norm group. This does not mean, however, that the student answered 71% of the items correctly.



Student's National Percentile Rank = 71

This explains why the most direct and proper use of the NP scores is to compare a student's score with that of the national norm group.

Normal curve equivalent scores

The design of NCE scores makes them very useful for comparisons of scores across subject areas or among different students (or groups of students). A normal curve equivalent score allows meaningful comparison among different test sections within the *ISTEP*+ achievement test. For example, if a student receives NCE scores of 53 on Total Reading and 45 on Total Mathematics, you can correctly say that the reading score is eight points higher than the mathematics score.

NCE scores are represented on a scale of 1 to 99. This scale coincides with the national percentile scale at 1, 50, and 99. NCE scores have the advantage of being based on an equal-interval scale. That is, the difference between two successive scores on the scale is the same over all parts of the scale. This means that, unlike percentiles, NCE scores can be averaged to compare groups of students. Average NCE scores can also be converted to national percentiles for a more meaningful understanding of the scores. This is because NCE scores and NP ranks have a consistent relationship.

Correspondence Between National Percentile Ranks and Nearest Whole Normal Curve Equivalent										
Percentile Rank	NCE	Percentile Rank	NCE	Percentile Rank	NCE					
99	99	66	59	33	41					
98	93	65	58	32	40					
97	90	64	58	31	40					
96	87	63	57	30	39					
95	85	62	56	29	38					
94	83	61	56	28	38					
93	81	60	55	27	37					
92	80	59	55	26	36					
91	78	58	54	25	36					
90	77	57	54	24	35					
89	76	56	53	23	34					
88	75	55	53	22	34					
87	74	54	52	21	33					
86	73	53	52	20	32					
85	72	52	51	19	32					
84	71	51	51	18	31					
83	70	50	50	17	30					
82	69	49	49	16	29					
81	68	48	49	15	28					
80	68	47	48	14	27					
79	67	46	48	13	26					
78	66	45	47	12	25					
77	66	44	47	11	24					
76	65	43	46	10	23					
75	64	42	46	9	22					
74	64	41	45	8	20					
73	63	40	45	7	19					
72	62	39	44	6	17					
71	62	38	44	5	15					
70	61	37	43	4	13					
69	60	36	42	3	10					
68	60	35	42	2	7					
67	59	34	41	1	1					

What is the difference between NP ranks and NCE scores?

The fundamental difference between NP ranks and NCE scores is that percentile ranks represent measurement on an ordinal scale (one without equal intervals between ranks), while NCE scores make use of interval scaling. This means that NCE scores can be added, subtracted, multiplied, and divided (like numbers in arithmetic), while NP ranks technically cannot.

Imagine yourself as a runner in a marathon. You are competing against 99 other runners. At the beginning of the race, you are about even with everyone else. However, as the race unfolds, you find yourself falling farther and farther behind. Eventually, the runners are spread out in a pattern similar to a normal distribution. A few runners are at the front of the group, a few are at the end, while the majority of the runners are bunched in the middle. You are in last place, a half block behind the second-to-last runner. At this point, you hail a taxi and travel past the other runners at 35 miles per hour. At first, you pass runners rather slowly (one percentile rank for each of the other 99 runners that you pass), needing to travel a half block or so between runners before they are passed. Soon, however, you make it to the middle of the group and pass several runners every time the taxi travels a few feet. Eventually, you reach the leaders who are spaced similarly to those at the back of the race. Again, passing runners takes more time—and gasoline—as you move up to the lead (the 99th percentile, with 99% of the racers behind you).

So it is with percentile ranks; the percentile intervals (like the runners) are closer together in the middle and farther apart at the ends of the scale. Therefore, a few additional correct answers on a test may move a student from an NP of 45 all the way to an NP of 55 or 60. In contrast, the same few additional correct answers may increase the rank of a student originally receiving an NP of 90 very little, if at all.

Normal curve equivalent scores are a derivation of NP ranks designed so that the difference between any two adjacent scores is the same no matter where they are on the scale. Thus, moving from NCE 1 to NCE 2 is the same move as one from NCE 50 to NCE 51 or from an NCE 98 to NCE 99. Because of the equal interval scale, NCE scores may legitimately and meaningfully be compared to other NCE scores as well as added, divided, etc. This is why mean scores are derived from NCE scores, or a similar unit, rather than NP ranks.

Grade equivalent scores

Grade equivalents range from K.0 through 12.9. Preceding the decimal, K through 12 represent the thirteen years of school. Following the decimal, 0 through 9 represent the ten months in the traditional school year, with September represented as .0, October as .1, November as .2, and so on through June, which is represented as .9.

A grade equivalent (GE) represents the grade and month in school of students in the norm group whose test performance is equivalent to the test performance of a given student. When interpreting grade equivalents, take care not to confuse them with criterion-referenced scores. If a tenth-grade student obtains a grade equivalent of 11.8 on a mathematics test, it does not mean that the student has mastered all the mathematics taught in the school district during the first eight months of Grade 11. It means only that the student's performance on the Grade 10 test is equivalent to the typical performance of the norm group students administered the Grade 10 test who had completed eight months of Grade 11.

Anticipated achievement normal curve equivalent scores

A student's anticipated achievement score estimates the average score for students of similar age, grade, and academic aptitude. This lets you compare an individual student's level of achievement to that expected of similar students.

Anticipated achievement scores are a function of a student's performance on the academic aptitude and achievement portions of *ISTEP*+. On *ISTEP*+ reports, anticipated achievement is presented as an anticipated achievement normal curve equivalent score (AANCE). You can compare the AANCE to the NCE for each *ISTEP*+ test section, content area total, and total battery score, as well as between different test sections within *ISTEP*+.

Cognitive skills index

The cognitive skills index (CSI) describes an individual's overall performance on the *ISTEP*+ aptitude test. It compares the student's cognitive ability with that of students who are the same age, without regard to grade placement. The CSI is a normalized standard score with a mean of 100 and a standard deviation of 16.

Summary Score Information

Mean and median scores

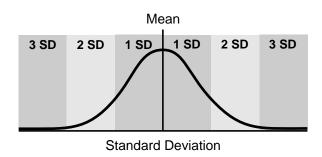
On *ISTEP*+ reports, summary information for a group (such as a class) is often presented using mean or median scores. The mean is the average score obtained by adding together all scores in the group and dividing by the number of students in the group. Scores reported on ordinal scales, such as national percentile ranks, cannot be averaged. For these, *ISTEP*+ presents a median score. The median is the middle score (50% of the scores fall below it). In a normal distribution, the mean and the median scores are equal.

Use mean and median scores to compare the group to similar students nationwide and also to compare each student's performance to that of the group. The mean and median scores presented in *ISTEP*+ reports are

- median national percentile (MDNP)
- mean normal curve equivalent (MNCE)
- national percentile of mean normal curve equivalent (NP of the MNCE)
- grade mean equivalent (GME)

Standard deviation

The Standard Deviation (SD) indicates the amount of variability in a group of scores. When scores are normally distributed (i.e., when they are part of a bell-shaped, "normal" curve), about two-thirds of the scores are within one SD above and below the average (mean) score, and about 95% of scores are within 2 SDs of the mean. In almost any shaped distribution, all scores will be within 5 standard deviations of the mean score.



Two kinds of information offer a broader understanding.

ISTEP+ reports provide two general types of information: criterion-referenced and optional norm-referenced. The criterion-referenced set of items reports a student's standing relative to the Indiana Academic Standards established by the State Board of Education as well as on Essential Skills defined in the Indiana Academic Standards. The optional norm-referenced set of items compares student performance with that of other students nationwide.

Use these two types of information together to acquire a more complete picture of a student's performance. The Proficiency Roster, the Class Essential Skills Report, and the Student Report indicate the results from only the criterion-referenced test items. The Class Record Sheet, NRT Student Report, and *ISTEP*+ labels indicate the results from the optional norm-referenced test items.

Because the criterion-referenced and optional norm-referenced measures of performance are very different, comparing them is inappropriate. You may use them together to build a broader understanding of a student's performance.

Student Report

The Student Report presents test information to parents in ways that are easy to understand. It encourages them to discuss their child's strengths and needs and helps them become more involved in the child's learning process. Page 1 of the Student Report contains student performance data for English/language arts and mathematics. Page 2 contains the student's Applied Skills results. Two copies of this report are provided. One copy is for teacher use and one copy is for the parents.

Criterion-Referenced Information

The top section of this report, called "Indiana Academic Standards," reports the student's scale scores in English/language arts and mathematics and relates these scores to the Indiana Academic Standards established by the State Board of Education (see page 11 for definition).

The center section lists the Essential Skills measured by the *ISTEP*+ for the student's grade. Next to each skill, the student's academic performance is indicated by the Student Skill Score, along with the Passing Skill Score for a student at the standard, and the difference between the two scores.

Sample Student Report

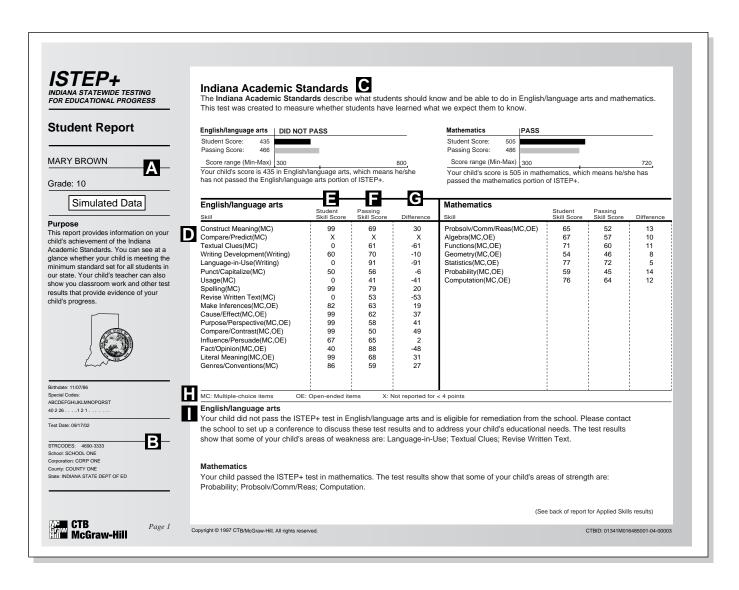
The sample Student Report presents results for Mary Brown, a tenth-grade student who took the *ISTEP*+ achievement test. The top section of the report describes Mary's performance as measured against the Indiana Academic Standards, and it shows her achievement as a scale score compared with the standard score adopted by the Board of Education.

On the same report, the tenth-grade Essential Skills are listed. Reading to the right of the first Essential Skill, Construct Meaning, you will see that Mary achieved a Student Skill Score of 99 as compared with the standard of 69, or 30 points higher than the standard score.

Mary's English/language arts total score is reported in two ways:

- the Student Skill Score for each Essential Skill, and
- a scale score of 435 (see "Indiana Academic Standards" in area C).

This scale score indicates that Mary did not pass the Indiana Academic Standards in English/language arts. Her score of 505 in mathematics means she did pass the Indiana Academic Standards for that subject.

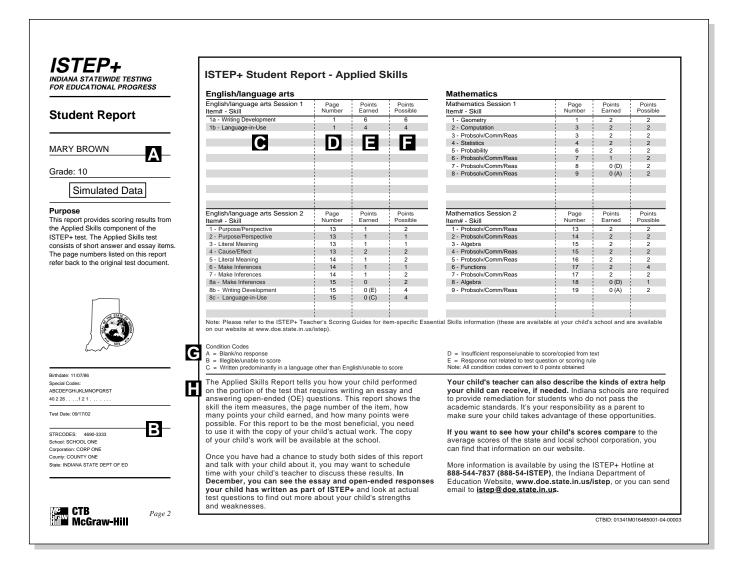


Highlights of the Student Report

- A Identifies the student's name and grade.
- **B** Indicates the test date and identifies the corporation-school number, school, corporation, county, and state.
- **C** Explains the student's performance relative to the Indiana Academic Standards established by the Board of Education.
- **D** Lists Essential Skills, grouped by content area.
- **E** Presents the Student Skill Score that the student obtained.
- Indicates the Passing Skill Score for a student meeting the standard for this specific Essential Skill.
- **G** Shows the difference between the Student Skill Score and the Passing Skill Score for a student at the standard.
- **H** Defines symbols and acronyms used in this report.
- **I** Explains student's areas of strength and weakness.

Student Report (Back)

The reverse side (back) of the Student Report lists individual student test results for each Applied Skills item by subject area and test session. It provides the number of points the student earned on each item, as well as the maximum number of points possible. This report is used in conjunction with the *Teacher's Scoring Guides* and the imaged student responses to help the teacher explain the scores and the scoring process. Imaged student responses will be returned to the schools in December 2002 along with a third copy of the Student Report.



Sample Student Report (Back)

The sample Student Report (Back) provides test results for Mary Brown, a tenth-grade student who took the *ISTEP*+ achievement test. Under English/language arts, Session 2, one can observe that item number 1 of this session is located on page 13 of the imaged student responses and that Mary scored one point. The maximum possible for this item is two points.

Highlights of the Student Report (Back)

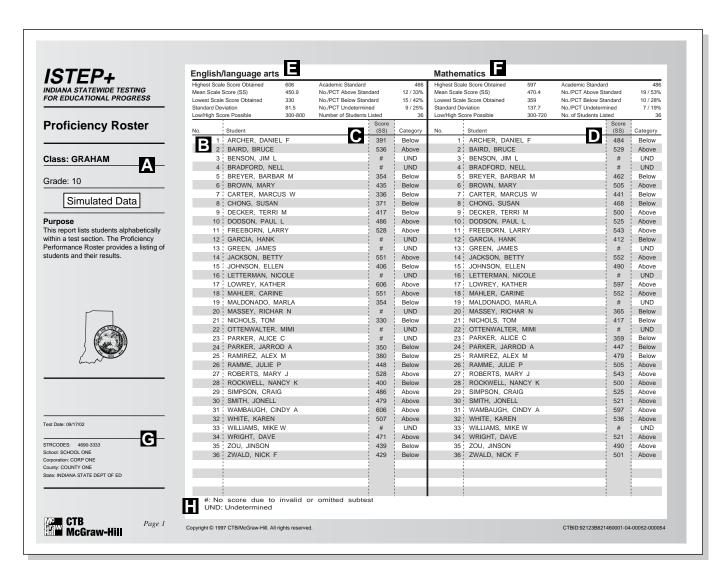
- A Identifies the student's name and grade.
- **B** Indicates the test date and identifies the corporation-school number, school, corporation, county, and state.
- **C** Lists each item and its Essential Skill by subject and test session.
- **D** Indicates the page number on which the item appears in the test book.
- Presents the number of score points that the student earned for the given Applied Skills item or, if no score, the letter of the condition code.
- Indicates the number of points possible for the given Applied Skills item.
- **G** Explains Condition Codes.
- **H** Provides information for parents.

Proficiency Roster

This report lists all students in the class alphabetically and tells the teacher how each student performed in the content areas of English/language arts and mathematics. Also shown is the scale score for each student in each of the content areas.

In the upper portion of the report, summary information is given for the class as a whole. Shown for each of the two content areas are the class average (mean scale score), the standard deviation, the lowest and highest scale scores obtained by the students in the group, and the lowest and highest possible scores.

The group's performance is also compared to the academic standard to show the number and percentage of students above and below the standard.



Highlights of the **Proficiency Roster**

- A Identifies the class by the teacher's name and grade.
- **B** Lists students alphabetically within the class.
- Provides each student's scale score and performance category within the English/language arts content area.
- **D** Provides each student's scale score and performance category within the mathematics content area.
- **E** Provides English/language arts summary information for the class.
- **F** Provides mathematics summary information for the class.
- **G** Indicates the test date and identifies the corporation-school number, school, corporation, county, and state.
- **H** Defines the symbols and acronyms used in this report.

Class Essential Skills Report

The Class Essential Skills Report presents Essential Skill information for all the students in your class on a single report. It presents mastery information for each student and summarizes the performance of the class as a whole.

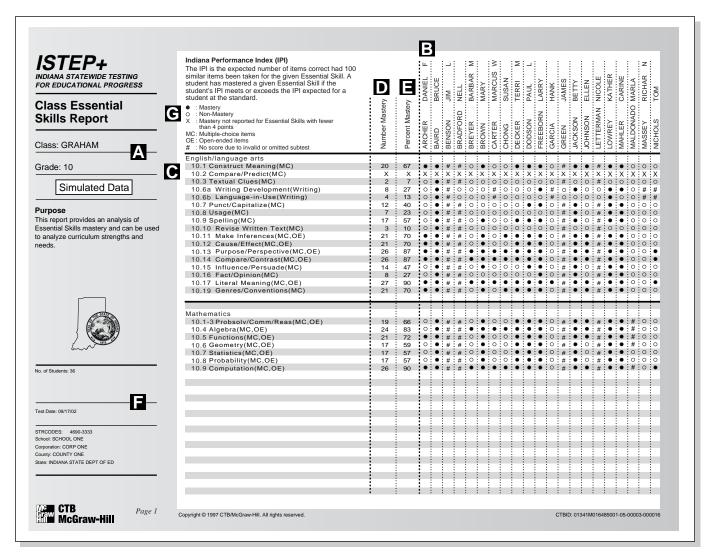
Essential Skills Information

The name of each student in the class appears in alphabetical order across the top of the report. The column below the student's name presents mastery information for that student. The Essential Skills for the grade appear on the left side of the report.

To the right of each Essential Skill the following information appears:

- the number of students who mastered the Essential Skill, and
- the percentage of students in the class who mastered the Essential Skill.

You can use this information to identify areas in which students may need additional instruction.

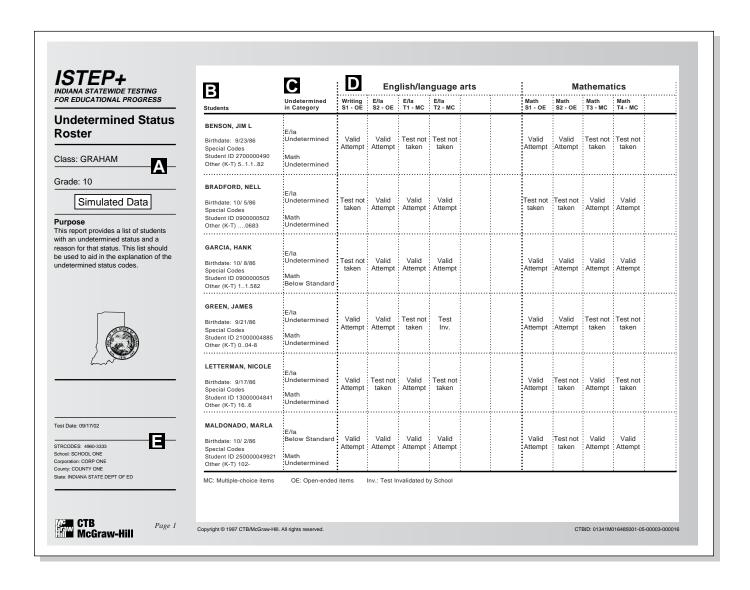


Highlights of the Class Essential Skills Report

- A Identifies the class by the teacher's name and grade.
- **B** Lists students alphabetically by name from left to right.
- **C** Lists Essential Skills for the grade.
- **D** Presents the number of students who mastered the Essential Skill.
- E Shows the percentage of students who mastered the Essential Skill (see page 11 for the definition of "Mastery").
- Indicates the test date and identifies the corporation-school number, school, corporation, county, and state.
- **G** Defines the symbols and acronyms used in this report.

Undetermined Status Roster

This report provides a list of all students in the class who have an undetermined status. Students who fail to complete one or more subtests in English/language arts or mathematics are listed as undetermined. The report indicates whether the subtest was not taken or invalidated, thus explaining the reason for the undetermined status.



Highlights of the Undetermined Status Roster

- A Identifies the class by the teacher's name and grade.
- **B** Lists students alphabetically who have an undetermined status in either English/language arts or mathematics.
- C Indicates whether the undetermined status is in English/language arts or mathematics.
- **D** Indicates which subtest was invalidated or not completed.
- Indicates the test date and identifies the corporation-school number, school, corporation, county, and state.

ISTEP+ Label

The *ISTEP*+ Label presents an individual student's criterion-referenced and optional norm-referenced test results in a form that you can easily attach to the student's permanent record. As shown below, the label will always provide CRT score information. If the optional norm-referenced test is administered, the label will provide the same NRT data found on the Class Record Sheet.

Note: Students who take the Graduation Qualifying Examination Retest will NOT take the NRT test.

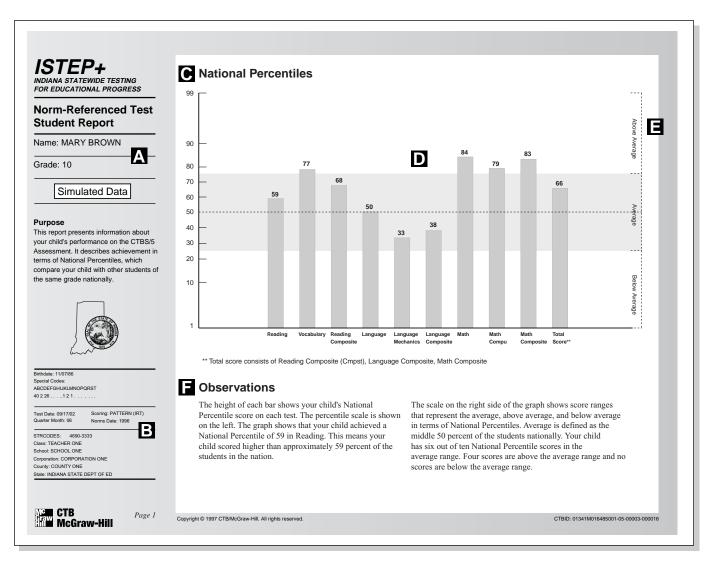
BROWN MARY	T TE	T TEST CSI		SCORES SEQ ANA		A INVE	NVRB MEM VRB			В				
	S TCS/2 102 S AGE / 15-		E NPA	· ·	51	69 6	50	58	45					
BROWN MARY DOB: 11/ 7/86	ISTE		READING READ VOC		LANG LANG				EMATIC COMP		TOTL SCOR	ISTE	P+ RESUL E/LA	TS MATH
CODES: 40 2 261 2 1 NORMS DATE: 1996 QUARTER MONTH: 06 PATTERN (IRT)	GRADE	NP	59 77 10.8 12.+ 55 66 50 50	68 11.6 60 49	50 10.2 50 51	33 7.7 41 50	38 8.7 43 49	84 12.+ 71 50	79 12.+ 67 50	83 12.+ 70 49	11.3	STANDARD OBTAINED CATEGORY	466 435 BELOW	486 505 ABOVE
M016485001-05-0000	DATE 09/17											l		

NRT Student Report

The NRT Student Report provides parents/guardians with normative information about their child's academic achievement in an easily understood format. This report is very useful for parent-teacher conferences. The NRT Student Report lists the student's areas of strength and weakness so that instruction can be customized to meet his or her individual needs.

The national percentile ranks for each test are vertically displayed along the left side of the graph, and the height of each bar shows the student's performance compared with students nationally. **Note:** Students who take the Graduation Qualifying Examination Retest will NOT take the NRT test.

The norm-referenced scores presented on the NRT Student Report are national percentile ranks (NP). National percentile ranks compare a student's scores with the norm group (or "national average"). See page 14 for more information about national percentile ranks.



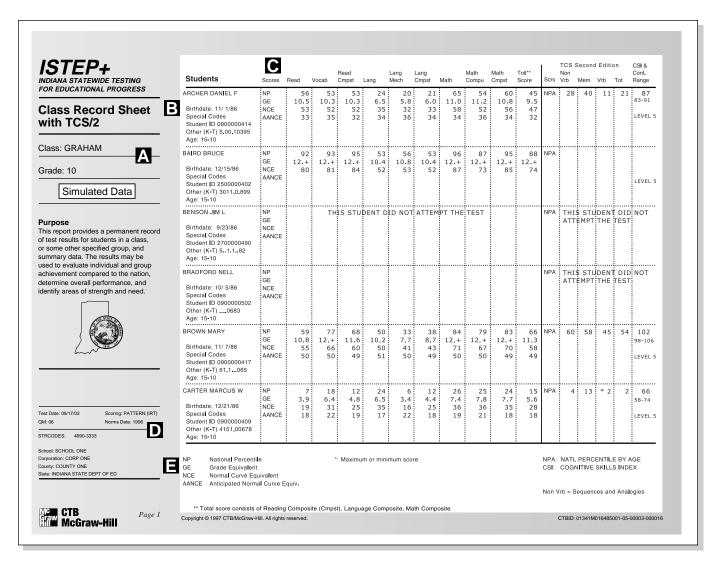
Highlights of the NRT Student Report

- A Identifies the student's name and grade.
- Indicates the test date and the Quarter Month (QM) upon which norm-referenced scores are based. Also identifies the corporation-school number, class, school, corporation, county, and state.
- Displays the national percentiles. These data are based on the testing of a nationally representative norming sample.
- **D** Shows the total national percentile rank attained by the student for each test.
- E Shows score ranges representing above average, average, and below average performance based on national percentiles.
- **E** Explains the meaning of the student's national percentile (NP) scores and ranges by area tested.

Class Record Sheet with TCS/2

The Class Record Sheet (CRS) with TCS/2 lists the norm-referenced results for each student in a class or other specified group, and provides summary data for the class as a whole. This report gives you an overview of your students' achievement levels so that you can plan appropriate instructional activities for individuals and groups.

The CRS reports the following norm-referenced scores: national percentile (NP), grade equivalent (GE), normal curve equivalent (NCE), anticipated achievement normal curve equivalent (AANCE), cognitive skills index (CSI), and the national percentile by age (NPA).



Individual Performance

A CRS for a tenth-grade class is shown on page 32. Taking the record of Mary Brown (a fictitious student) as an example, you will see that Mary's national percentile ranks range from 33 in Language Mechanics to 84 in Math. You will also see that Mary's overall achievement is above the national average (Total Score NP = 66). The CRS also shows Mary's national percentile ranks converted to normal curve equivalent (NCE) scores. The NCE scores allow for meaningful comparisons to be made across subject areas and among students within the class. When viewing the sample report, it is more meaningful to state that Mary's Math Composite NCE score is 15 points lower than Bruce Baird's Math Composite NCE score (second student) than to say that her Math Composite NP score is 12 points less than his. For additional information, see the discussion on NP ranks and NCE scores on pages 14 through 16.

If a substantial number of students in the standardization population (norm group) obtained perfect scores on a particular test section, the highest percentile rank to be reported will be less than 99. For example, if the report indicates a score of 97 with an asterisk, this means that 3% of the norm group received perfect scores and that 97 is the highest NP ranking available. On *ISTEP*+ achievement test reports, an asterisk appears beside any scores that are the maximum (or minimum) possible.

Group Information

Summary information for the class as a whole appears at the end of the CRS (not shown on the sample report on page 32). Scores include the median national percentile (MDNP), grade mean equivalent (GME), and the mean normal curve equivalent (MNCE). Also included are the mean anticipated normal curve equivalent (MANCE) and the mean cognitive skills index (MCSI).

Use the summary information provided on the last page of your CRS to compare your class with students in the same grade nationwide and to compare each student's performance with that of the entire class.

Highlights of the Class Record Sheet with TCS/2

- A Identifies the class by the teacher's name and grade.
- **B** Lists students alphabetically with date of birth and codes that reflect responses recorded in the *ISTEP*+ Student Information Questionnaire.
- Reports the norm-referenced test scores for each student: national percentile (NP), grade equivalent (GE), normal curve equivalent (NCE), and anticipated achievement normal curve equivalent (AANCE).
- Indicates the test date and the Quarter Month (QM) upon which the norm-referenced scores are based. Also identifies the corporation-school number, school, corporation, county, and state.
- **E** Defines acronyms for achievement score names.

Reports for the School Administrator

Two kinds of information offer a broader understanding.

ISTEP+ reports provide two general types of information: criterion-referenced and optional norm-referenced. The criterion-referenced set of items reports a student's standing relative to the Indiana Academic Standards established by the State Board of Education as well as on Essential Skills defined in the Indiana Academic Standards. The optional norm-referenced set of items compares student performance with that of other students nationwide.

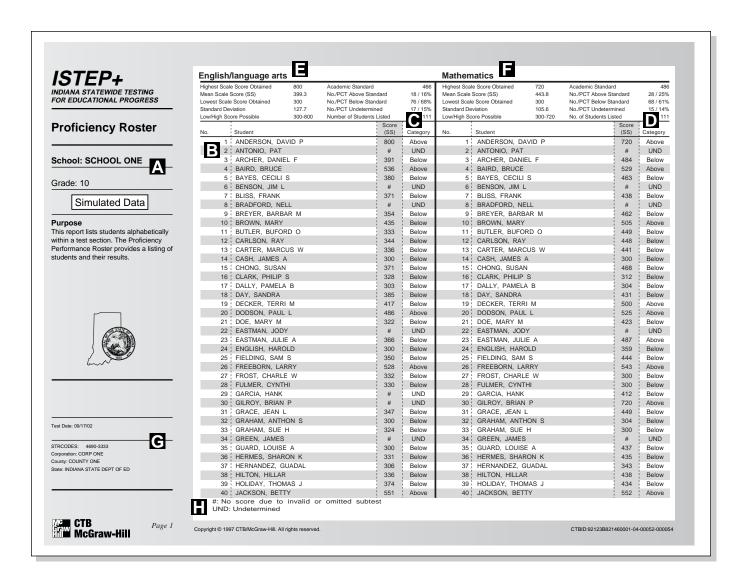
Use these two types of information together to acquire a more complete picture of the performance of the students within your school. The Proficiency Roster and the School Proficiency Performance Summary indicate the results of your students based on criterion-referenced test items. The school Evaluation Summary Report with TCS/2 reports the results of your students based on the optional norm-referenced test items.

Because the criterion-referenced and optional norm-referenced measures of performance are very different, comparing them is inappropriate. You may use them together to build a broader understanding of a student's performance.

Reports for the School Administrator

Proficiency Roster

This report lists all students in the school, by grade, alphabetically, and tells the principal how each student performed in the content areas of English/language arts and mathematics. Also shown is the scale score for each student in each of the content areas.



Highlights of the Proficiency Roster

- A Identifies the school and grade.
- **B** Lists students alphabetically within the school for the grade tested.
- Provides each student's scale score and performance category (see page 11 for definition) within the English/language arts content area.
- Provides each student's scale score and performance category (see page 11 for definition) within the mathematics content area.
- Provides English/language arts summary information for the school.
- Provides mathematics summary information for the school.
- **G** Indicates the test date and identifies the corporation-school number, corporation, county, and state.
- **H** Defines the symbols and acronyms used in this report.

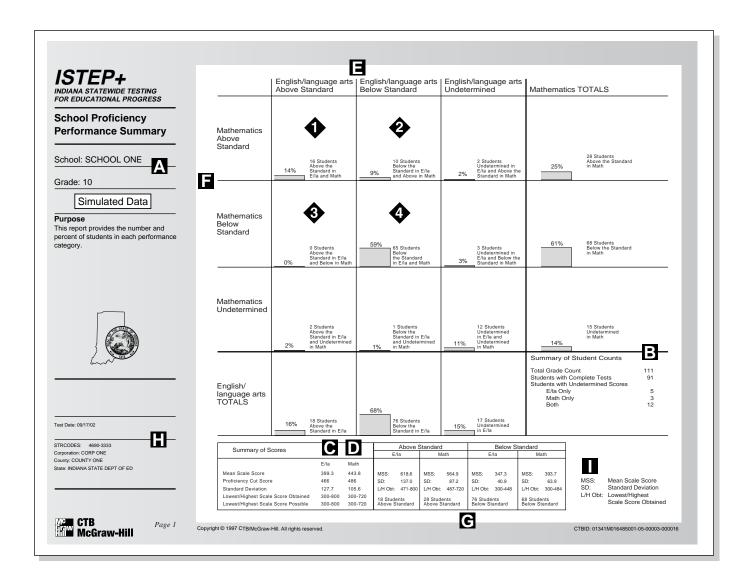
School Proficiency Performance Summary

This report summarizes groups of students according to performance categories in the two content areas assessed by *ISTEP+*. It also provides summary scores by performance category.

This report summarizes groups of students according to their performance relative to the Indiana Academic Standards (see page 11 for definition) in the content areas assessed by *ISTEP+*. For example, the rectangle in the upper left-hand corner of the report indicates the number and percentage of students who have obtained scores ABOVE the Indiana Academic Standards in both English/language arts and mathematics. Students tallied in the rectangle immediately to the right of the upper left-hand box have scored ABOVE the standard in mathematics but BELOW the standard in English/language arts. Students reported in the rectangle immediately below the upper left-hand corner have scored ABOVE the English/language arts standard but BELOW the standard in mathematics. Students reported in rectangle have scored BELOW the standard in both English/language arts and mathematics. The sum of students listed in blocks 1, 2, 3, and 4 is the total number of students with complete tests.

In the section entitled "Summary of Student Counts," the number of students with complete tests in both subjects, the number with undetermined scores in one or both areas, and the total number of students are shown.

A section at the bottom of the report called "Summary of Scores" provides school averages, standard deviations, and score ranges. For each of the performance categories ABOVE standard and BELOW standard, the mean scale score, the standard deviation, and the lowest and highest scale scores obtained are shown.

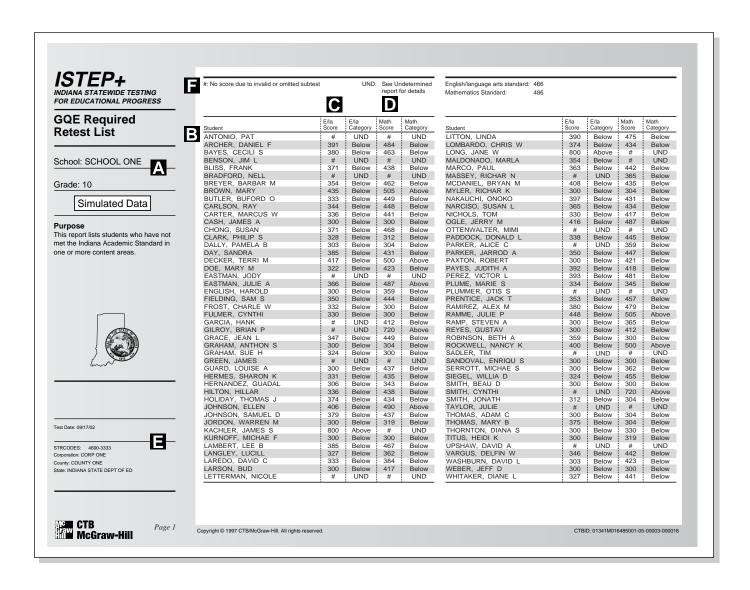


Highlights of the School Proficiency Performance Summary

- A Identifies the school and grade.
- **B** Reports the number of students.
- **C** Provides school summary information for English/language arts.
- **D** Provides school summary information for mathematics.
- **■** The **columns** report Indiana Academic Standards categories for English/language arts.
- The rows report Indiana Academic Standards categories for mathematics.
- **G** Provides school summary scores by performance category for both English/language arts and mathematics.
- Indicates the test date and identifies the corporation-school number, corporation, county, and state.
- Defines the acronyms used in this report.

GQE Required Retest List

This report lists alphabetically those students who fell below the standard on the *ISTEP*+ Fall 2002 Graduation Qualifying Examination in either English/language arts or mathematics or in both content areas. It also shows the performance category and scale score for each student in each of the content areas.

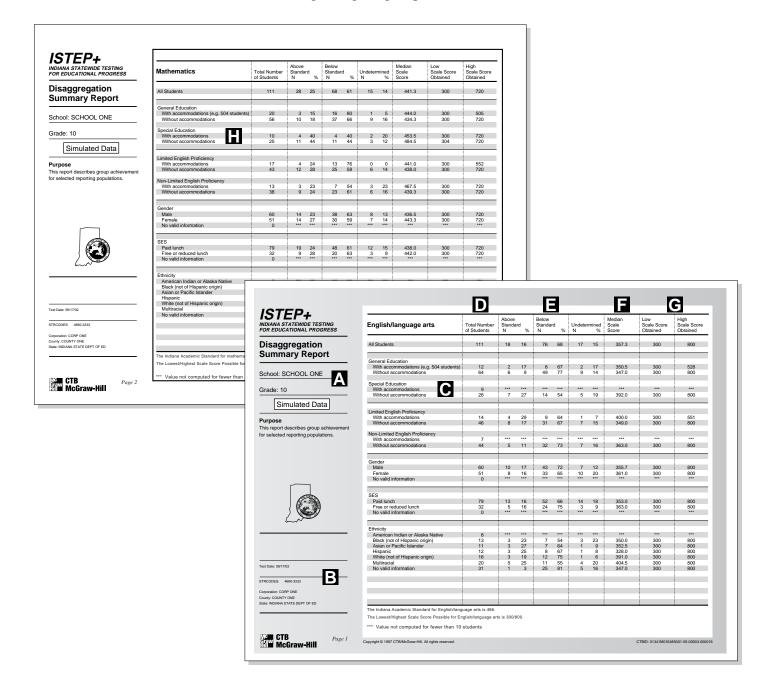


Highlights of the GQE Required Retest List

- A Identifies the school and grade.
- **B** Lists students alphabetically within the school who will need to be administered a GQE retest.
- Provides each student's scale score and performance category (see page 11 for definition) within the English/language arts content area.
- Provides each student's scale score and performance category (see page 11 for definition) within the mathematics content area.
- Indicates the test date and identifies the corporation-school number, corporation, county, and state.
- **F** Defines the symbols and acronyms used in this report.

Disaggregation Summary Report

The Disaggregation Summary Report is on two pages, one for English/language arts and one for mathematics. This report presents, by subject, the total number of students with scores identified as above the standard, below the standard, and undetermined. This information is provided for all students, as well as all subgroups, e.g., special education students with accommodations and without accommodations. The Disaggregation Summary Report can be used to obtain information regarding all groups of students.



Highlights of the School Disaggregation Summary Report

- A Identifies the school and grade.
- **B** Indicates the test date and identifies the corporation-school number, corporation, county, and state.
- **C** Identifies the subgroups in the English/language arts content area.
- **D** Lists the total number of students.
- E Indicates the number and percent of students above standard, below standard, and undetermined.
- Indicates the median scale scores. (Not computed for groups with fewer than 10 students).
- **G** Indicates the lowest and highest scale scores obtained.
- **H** Identifies the subgroups in the mathematics content area.

Graduation Test Labels

An individual **white** label is provided for each student and for each content area. These student labels indicate the student's status relative to meeting the standard in English/language arts and mathematics. Separate labels are provided for each content area passed and for each content area **not** passed. Labels will also be provided for students who did not retest or who received an undetermined status in one or both content areas.

ISTEP+ INDIANA STATEWIDE TESTING FOR EDUCATIONAL PROGRESS	
BROWN MARY	GQE - Mathematics
Birthdate: 11/07/86 Grade: 10	Standard: 486
Corp: CORP ONE	Obtained: 505
School: SCHOOL ONE Test Date: 09/17/02	Result: PASS

ISTEP+
INDIANA STATEWIDE TESTING
FOR EDUCATIONAL PROGRESS

BROWN MARY
Birthdate: 11/07/86
Grade: 10
Corp: CORP ONE

RETEST REQUIRED

GQE - English/language arts

Standard: 466
Obtained: 435

Result:

DID NOT PASS

School: SCHOOL ONE

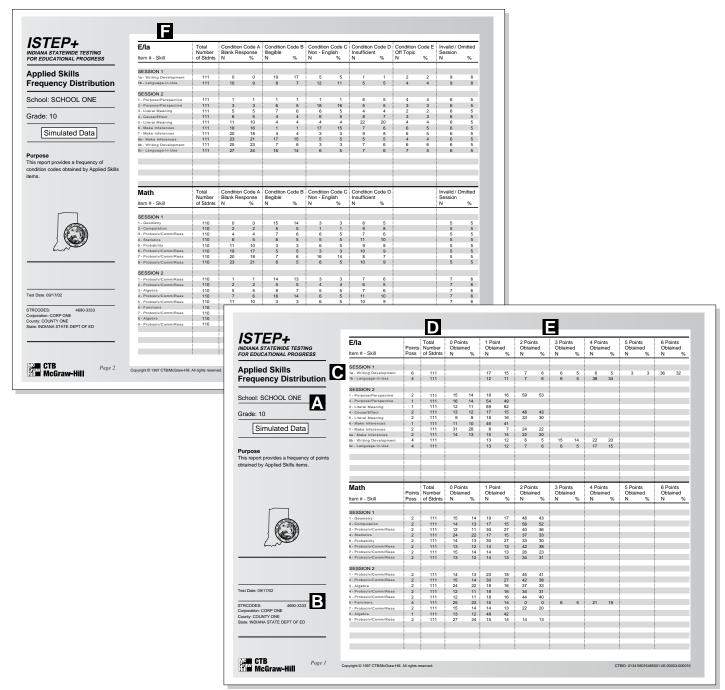
Test Date: 09/17/02

Retest label

Pass label

Applied Skills Frequency Distribution

The Applied Skills Frequency Distribution report presents, at the school level, the number and percentage of students who obtained each score point for the individual Applied Skills items. This information can be used to determine if the students in your school show strengths and needs on specific Applied Skills items and, therefore, in the Essential Skills that are assessed by these items.



Highlights of the Applied Skills Frequency Distribution

- A Identifies the school and grade.
- **B** Indicates the test date and identifies the corporation-school number, corporation, county, and state.
- C Identifies the item number and the skill being scored (for items that are scored for more than one skill). Descriptions of each item and scoring rubrics and skills are found in the *ISTEP+Teacher's Scoring Guides*.
- **D** Lists the total number of students tested in the school.
- **E** Lists the number and percentage of students obtaining each score point.
- **E** Lists by condition code the number and percentage of students with no response.

Condition Codes

A = Blank/no response

B = Illegible/unable to score

C = Written predominantly in language other than English/unable to score

D = Insufficient response/unable to score/copied from text

E = Response not related to test question or scoring rule

Note: All condition codes convert to 0 points obtained.

Evaluation Summary Report with TCS/2

The school Evaluation Summary Report with TCS/2 (EVSUM) presents school level information derived from the optional norm-referenced test sections. In each subject area, it reports a variety of scores to enhance your analysis of group results.

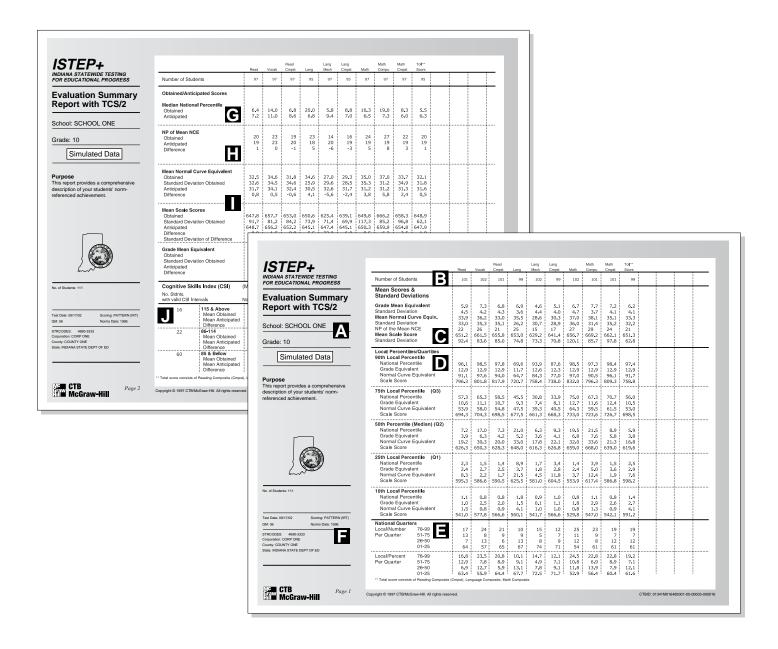
An EVSUM is divided into two pages. Page one lists mean scores and standard deviations, local percentiles/quartile points, and distributions per quarter. Page two provides obtained scores, anticipated scores, and the difference between the two.

Mean Scores and Standard Deviations

The top portion of page one of the EVSUM provides mean scores and standard deviations for optional norm-referenced subtests and subtest totals. Mean normal curve equivalent scores are particularly useful in comparing your averages with those of the corporation and/or the state level. The national percentile of the mean normal curve equivalent is the most frequently used average score to compare local scores with those of the national norm group.

Local Percentiles and Quartile Points

The middle section of page one provides norm-referenced scores in terms of national percentiles, grade equivalents, and normal curve equivalents for students at five points in the local distribution. The three quartile points—75th percentile (Q3), 50th percentile (Q2, median), and 25th percentile (Q1)—are shown, as is customary. In addition, the data at the 90th and 10th percentiles are also presented to allow a closer look at the highest- and lowest-performing students.



Distribution per Quarter

The bottom section of page one shows the number and the percentage of students in each quarter of the national percentile distribution. If the scores of your students produced a perfectly normal distribution identical to the norm group upon which the test was standardized, 25% of your students would fall in each quarter.

Note that for School One, total scores indicate that 61.6% of the students are in the lowest quarter, while 19.2% are in the upper quarter. At School One, 26.3% of the students scored above the average of the norm group (19.2% plus 7.1%).

Obtained and Anticipated Scores

The anticipated scores were established from data collected in a national study involving students of similar age, grade, and academic aptitude. Reviewing these data enables you to determine whether your students are performing at their potential as well as how they compare with similar students.

Highlights of the Evaluation Summary Report with TCS/2

- A Identifies the school and grade.
- **B** Shows the number of students with valid scores for each test section. School averages are based on these numbers.
- Shows the grade mean equivalent and its standard deviation, as well as the mean, standard deviation, and national percentile of the mean normal curve equivalent.
- Reports the scores that locate the three quartile points—75th percentile, 50th percentile (median), and 25th percentile—as well as the 90th and 10th percentiles.
- E Shows the number and percentage of your students in each quarter of the national percentile (NP) distribution.
- Indicates the test date and the Quarter Month (QM) upon which norm-referenced scores are based. Also identifies the corporation-school number, corporation, county, and state.
- **G** Shows the obtained and anticipated median (middle) national percentile.
- H Shows the obtained and anticipated national percentile corresponding to the mean normal curve equivalent and the difference between the two.
- For both the mean normal curve equivalent and grade mean equivalent, this report shows the obtained score, the standard deviation obtained, the anticipated score, and the difference between the obtained score and the anticipated score.
- In addition to the mean cognitive skills index (CSI), this section shows the mean obtained and anticipated normal curve equivalents, as well as the difference between the two, grouped by CSI intervals.

Two kinds of information offer a broader understanding.

ISTEP+ reports provide two general types of information: criterion-referenced and optional norm-referenced. The criterion-referenced set of items reports a student's standing relative to the Indiana Academic Standards established by the State Board of Education as well as on Essential Skills defined in the Indiana Academic Standards. The optional norm-referenced set of items compares student performance with that of other students nationwide.

Use these two types of information together to acquire a more complete picture of the performance of the students within your corporation. The Corporation Proficiency Performance Summary and the corporation Essential Skills Summary indicate the results of your students based on criterion-referenced items. The corporation Evaluation Summary Report with TCS/2 indicates the results of your students based on the optional norm-referenced items.

Because the criterion-referenced and optional norm-referenced measures of performance are very different, comparing them is inappropriate. You may use them together to build a broader understanding of a student's performance.

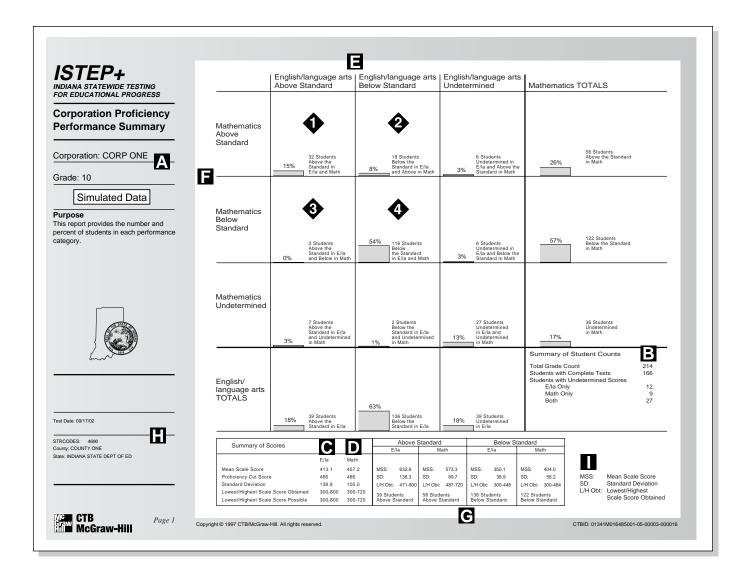
Corporation Proficiency Performance Summary

This report summarizes groups of students according to performance categories in the two content areas assessed by *ISTEP*+. It also provides summary scores by performance category.

This report summarizes groups of students according to their performance relative to the Indiana Academic Standards (see page 11 for definition) in the content areas assessed by *ISTEP+*. For example, the rectangle in the upper left-hand corner of the report indicates the number and percentage of students who have obtained scores ABOVE the Indiana Academic Standards in both English/language arts and mathematics. Students tallied in the rectangle immediately to the right of the upper left-hand box have scored ABOVE the standard in mathematics but BELOW the standard in English/language arts. Students reported in the rectangle immediately below the upper left-hand corner have scored ABOVE the English/language arts standard but BELOW the mathematics standard. Students reported in rectangle have scored BELOW the standard in both English/language arts and mathematics. The sum of students listed in blocks 1, 2, 3, and 4 is the total number of students with complete tests.

In the section entitled "Summary of Student Counts," the number of students with complete tests in both subjects, the number with undetermined scores in one or both areas, and the total number of students are shown.

A section at the bottom of the report called "Summary of Scores" provides school averages, standard deviations, and score ranges. For each of the performance categories ABOVE standard and BELOW standard, the mean scale score, the standard deviation, and the lowest and highest scale scores obtained are shown.

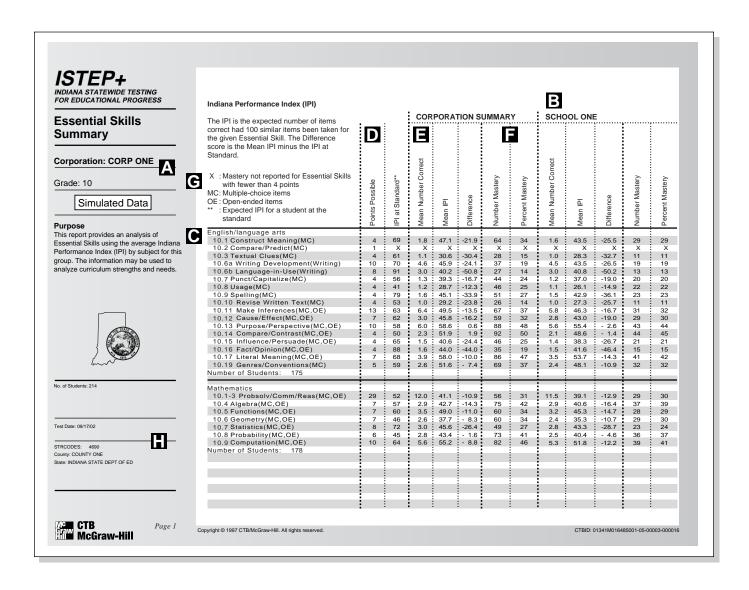


Highlights of the Corporation Proficiency Performance Summary

- A Identifies the corporation and grade.
- **B** Reports number of students.
- Provides corporation summary information for the English/language arts content area.
- **D** Provides corporation summary information for the mathematics content area.
- **E** The **columns** report Indiana Academic Standards categories for English/language arts.
- The **rows** report Indiana Academic Standards categories for mathematics.
- **G** Provides corporation summary scores by performance category for both English/language arts and mathematics.
- Indicates the test date and identifies the corporation-school number, county, and state.
- Defines the acronyms used in this report.

Essential Skills Summary

The corporation Essential Skills Summary provides criterion-referenced information from the *ISTEP*+ achievement tests. It presents Essential Skill information summarizing the performance of students for individual schools by grade. Schools may contact their corporation Test Coordinator to request a copy of this report.

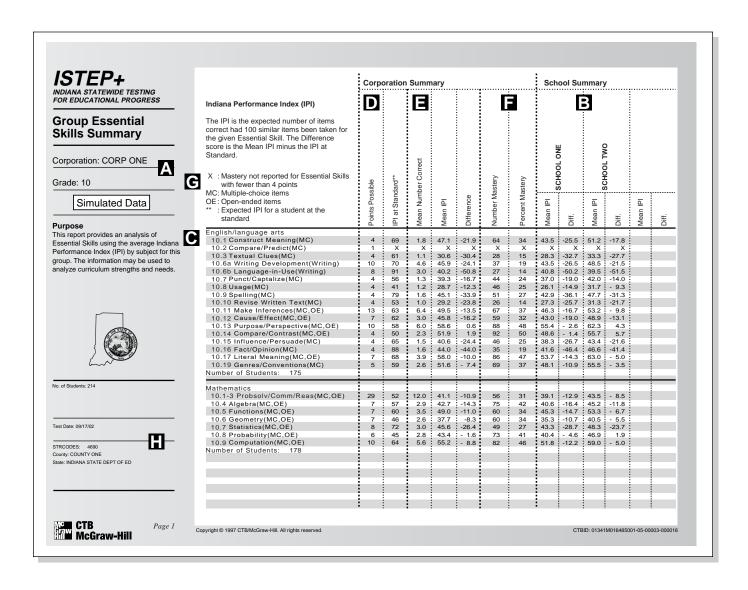


Highlights of the Essential Skills Summary

- A Identifies the corporation and grade.
- **B** Identifies the name of an individual school (one school per page).
- **C** Lists Essential Skills for the grade.
- **D** Presents the number of score points that assess each Essential Skill and lists the Indiana Performance Index (IPI) at the standard.
- E Lists the mean number of score points obtained by the students in your corporation by grade, the mean IPI obtained by your students, and the difference between the mean and standard IPI for each Essential Skill.
- **E** Lists the number of students and the percentage of students who obtained mastery of each Essential Skill (achieved an IPI at or above the standard).
- **G** Defines the symbols and acronyms used on this report.
- H Indicates the test date and identifies the corporation-school number, county, and state.

Group Essential Skills Summary

The corporation Group Essential Skills Summary provides criterion-referenced information from the *ISTEP*+ achievement tests. It presents Essential Skill information for the grade, summarizing the performance of students for each school by grade. Schools may contact their corporation Test Coordinator to request a copy of this report.

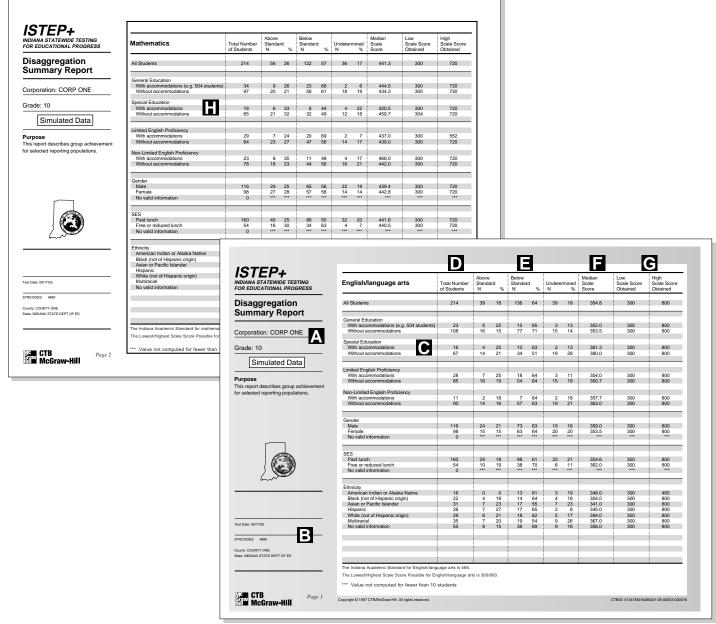


Highlights of the Group Essential Skills Summary

- A Identifies the corporation and grade.
- **B** Lists schools alphabetically by name from left to right.
- **C** Lists Essential Skills for the grade.
- Presents the number of score points that assess each Essential Skill and lists the Indiana Performance Index (IPI) at the standard.
- E Lists the mean number of score points obtained by the students in your corporation by grade, the mean IPI obtained by your students, and the difference between the mean and standard IPI for each Essential Skill.
- Lists the number of students and the percentage of students who obtained mastery of each Essential Skill (achieved an IPI at or above the standard).
- **G** Defines the symbols and acronyms used in this report.
- Indicates the test date and identifies the corporation-school number, county, and state.

Disaggregation Summary Report

The Disaggregation Summary Report is on two pages, one for English/language arts and one for mathematics. This report presents, by subject, the total number of students with scores identified as above the standard, below the standard, and undetermined. This information is provided for all students, as well as for all subgroups, e.g., special education students with accommodations and without accommodations. The Disaggregation Summary Report can be used to obtain information regarding all groups of students.

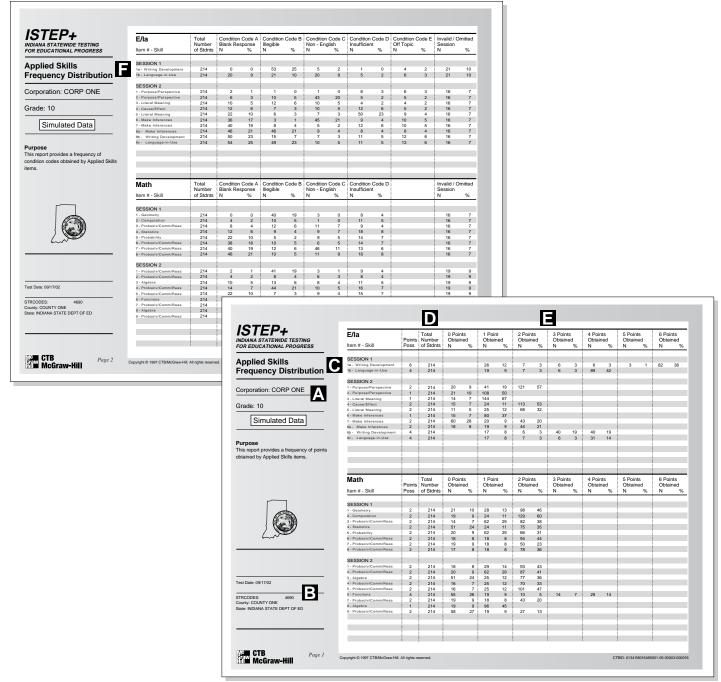


Highlights of the Disaggregation Summary Report

- A Identifies the corporation and grade.
- **B** Indicates the test date and identifies the corporation-school number, county, and state.
- C Identifies the subgroups in the English/language arts content area.
- **D** Lists the total number of students.
- Indicates the number and percent of students above standard, below standard, and undetermined.
- Indicates the median scale scores. (Not computed for groups with fewer than ten students.)
- **G** Indicates the lowest and highest scale scores obtained.
- H Identifies the subgroups in the mathematics content area.

Applied Skills Frequency Distribution

The Applied Skills Frequency Distribution report presents, at the corporation level, the number and percentage of students who obtained each score point for the individual Applied Skills items. This information can be used to determine if the students in your corporation show strengths and needs on specific Applied Skills items and, therefore, in the Essential Skills that are assessed by these items.



Highlights of the Applied Skills Frequency Distribution

- A Identifies the corporation and grade.
- **B** Indicates the test date and identifies the corporation-school number, county, and state.
- Identifies the item number and the skill being scored (for items that are scored for more than one skill). Descriptions of each item and scoring rubrics and skills are found in the *ISTEP+Teacher's Scoring Guides*.
- **D** Lists the total number of students tested in the corporation.
- **E** Lists the number and percentage of students obtaining each score point.
- **E** Lists by condition code the number and percentage of students with no response.

Condition Codes

A = Blank/no response

B = Illegible/unable to score

C = Written predominantly in language other than English/unable to score

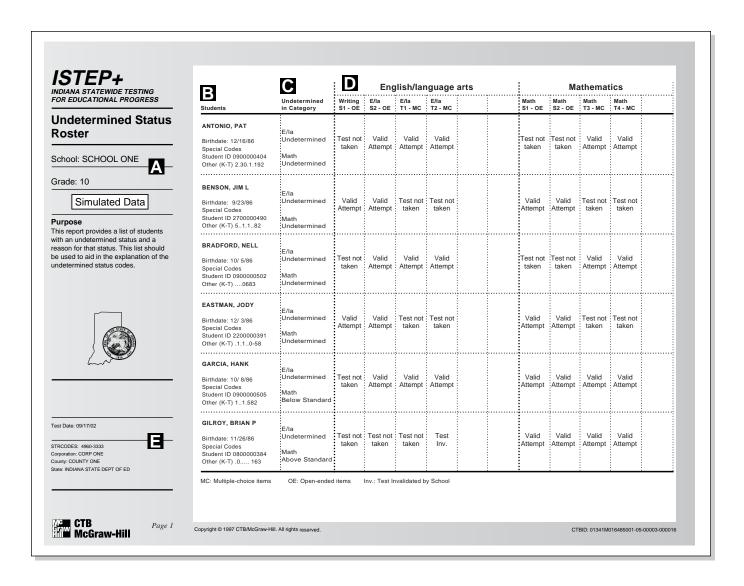
D = Insufficient response/unable to score/copied from text

E = Response not related to test question or scoring rule

Note: All condition codes convert to 0 points obtained.

Undetermined Status Roster

This report provides a list by school of all students in the corporation who have an undetermined status. Students who fail to complete one or more subtests in English/language arts or mathematics are listed as undetermined. The report indicates whether the subtest was not taken or invalidated, thus explaining the reason for the undetermined status.

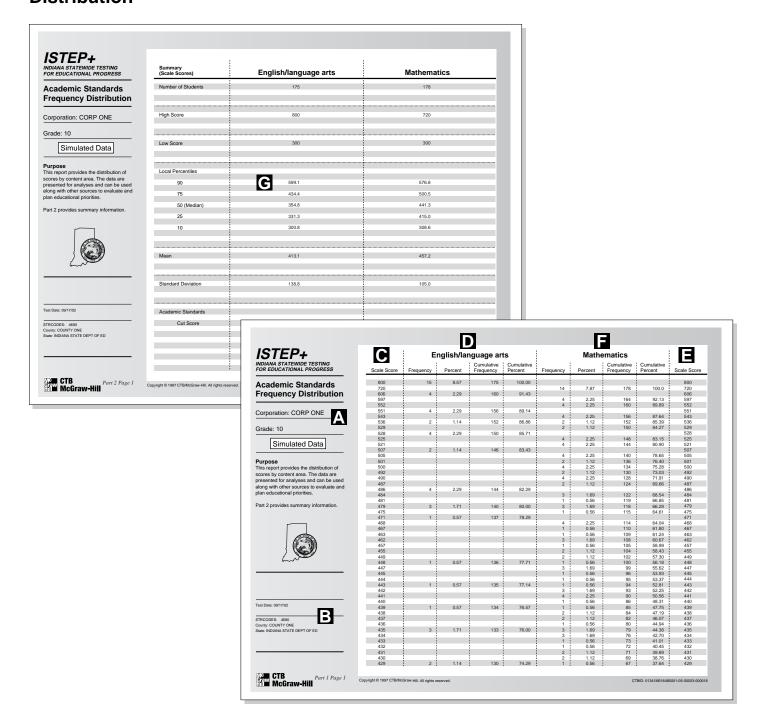


Highlights of the Undetermined Status Roster

- A Identifies the school and grade.
- **B** Lists students alphabetically who have an undetermined status in either English/language arts and/or mathematics.
- C Indicates whether the undetermined status is in English/language arts or mathematics.
- **D** Indicates which subtest was invalidated or not completed.
- E Indicates the test date and identifies the corporation-school number, corporation, county, and state.

Academic Standards Frequency Distribution

The Academic Standards Frequency Distribution report provides the corporation administrator with the distribution of scale scores achieved by all the students tested in the corporation. The data are presented for analysis and can be used, along with other sources, to evaluate and plan education priorities.



Highlights of the Academic Standards Frequency Distribution

- A Identifies the corporation and grade.
- **B** Indicates test date and identifies the corporation number, county, and state.
- **C** Lists the scale scores achieved on the English/language arts test.
- **D** Shows the number and percentage of students who obtained each scale score on the English/language arts test.
- **E** Lists the scale scores achieved on the mathematics test.
- **F** Shows the number and percentage of students who achieved each scale score on the mathematics test.
- G Indicates the scale scores achieved by students at five local percentiles (90, 75, 50, 25, and 10).

Evaluation Summary Report with TCS/2

The corporation Evaluation Summary Report with TCS/2 (EVSUM) presents corporation level information derived from the optional norm-referenced test sections. In each subject area, it reports a variety of scores to enhance your analysis of group results.

An EVSUM is divided into two pages. Page one lists mean scores and standard deviations, local percentiles/quartile points, and distributions per quarter. Page two provides obtained scores, anticipated scores, and the difference between the two.

Mean Scores and Standard Deviations

The top portion of page one of the EVSUM provides mean scores and standard deviations for optional norm-referenced subtests and subtest totals. Mean normal curve equivalent scores are particularly useful in comparing your averages with those at the state level. The national percentile of the mean normal curve equivalent is the most frequently used average score to compare local scores with those of the national norm group.

Local Percentiles and Quartile Points

The middle section of page one provides norm-referenced scores in terms of national percentiles, grade equivalents, and normal curve equivalents for students at five points in the local distribution. The three quartile points—75th percentile (Q3), 50th percentile (Q2, median), and 25th percentile (Q1)—are shown, as is customary. In addition, the data at the 90th and 10th percentiles are also presented to allow a closer look at the highest- and lowest-performing students.

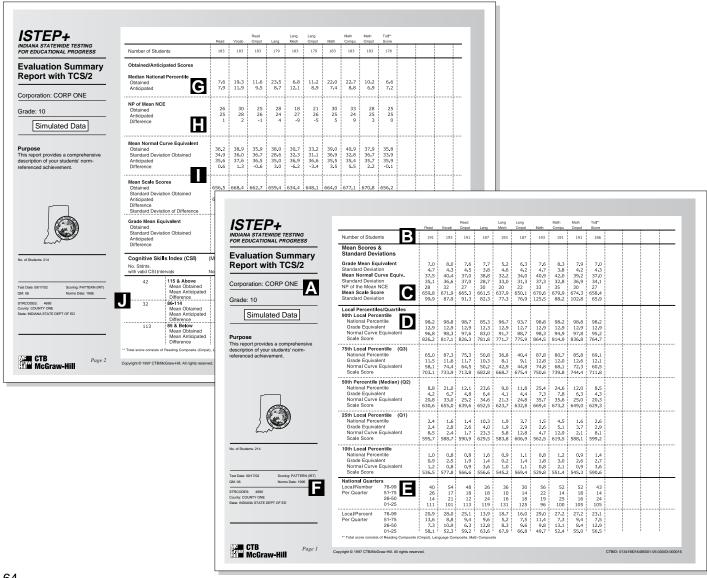
Distribution per Quarter

The bottom section of page one shows the number and the percentage of students in each quarter of the national percentile distribution. If the scores of your students produced a perfectly normal distribution identical to the norm group upon which the test was standardized, 25% of your students would fall in each quarter.

Note that for Corporation One, total scores indicate that 56.5% of the students are in the lowest quarter, while 23.1% are in the highest quarter. In fact, 30.6% of the students in Corporation One scored above the average of the norm group (23.1% plus 7.5%).

Obtained and Anticipated Scores

The anticipated scores were established from data collected in a national study involving students of similar age, grade, and academic aptitude. Reviewing these data enables you to determine whether your students are performing at their potential, as well as how they compare with similar students.



Highlights of the Evaluation Summary Report with TCS/2

- A Identifies the corporation and grade.
- B Shows the number of students with valid scores for each test section. Corporation averages are based on these numbers.
- Shows the grade mean equivalent and its standard deviation, as well as the mean, standard deviation, and national percentile of the mean normal curve equivalent.
- Reports the scores that locate the three quartile points—75th percentile, 50th percentile (median), and 25th percentile—as well as the 90th and 10th percentiles.
- E Shows the number and percentage of your students in each quarter of the national percentile (NP) distribution.
- Indicates the test date and the Quarter Month (QM) upon which norm-referenced scores are based. Also identifies the corporation-school number, county, and state.
- **G** Shows the obtained and anticipated median (middle) national percentile.
- H Shows the obtained and anticipated national percentile corresponding to the mean normal curve equivalent and the difference between the two.
- For both the mean normal curve equivalent and grade mean equivalent, this report shows the obtained score, the standard deviation obtained, the anticipated score, and the difference between the obtained score and the anticipated score.
- In addition to the mean cognitive skills index (CSI), this section shows the mean obtained and anticipated normal curve equivalents, as well as the difference between the two, grouped by CSI intervals.

Reference

Glossary

Anticipated Achievement Normal Curve Equivalent

A student's anticipated achievement score estimates the average score for students of similar academic aptitude. This lets you compare an individual student's level of achievement with that expected of similar students. Anticipated achievement scores are a function of a student's performance on the academic aptitude and achievement portions of *ISTEP*+.

Cognitive Skills Index

The cognitive skills index (CSI) describes an individual's overall performance on the *ISTEP*+ aptitude test. It compares the student's cognitive ability with that of students who are the same age, without regard to grade placement. The CSI is a normalized standard score with a mean of 100 and a standard deviation of 16.

Criterion-Referenced Test

A test that reports students' scores relative to the skills that make up the Indiana Academic Standards (see Essential Skills).

Essential Skills

Specific skills within the larger category of Indiana Academic Standards measured by *ISTEP*+ criterion-referenced questions.

Grade Equivalent

This score represents the grade and month in school of students in the norm group whose test performance is equivalent to the test performance of a given student. For example, if a tenth-grade student obtains a grade equivalent of 11.8 on a mathematics test, it does not mean that the student has mastered all the mathematics that is taught in the school district during the first eight months of Grade 11. It means only that the student's performance on this test is theoretically equivalent to the typical performance of students in the norm group who have completed eight months of Grade 11.

Indiana Academic Standards

To promote student academic achievement, the State Board of Education has adopted challenging standards for students in the following educational categories: reading comprehension, language mechanics/vocabulary, writing, mathematics basic skills, and mathematics applied skills. The standards are defined by a description of what a student should know and be able to do at the grade level completed by the student during the previous school year.

The Indiana Academic Standards define two general levels of knowledge and skill as follows:

Above the Standard (pass): The student who scores at or above the Indiana Academic Standards in English/language arts or mathematics demonstrates mastery of these subjects.

Glossary

Below the Standard (did not pass): The student who does not score at or above the Indiana Academic Standards in all likelihood needs remedial assistance to be successful at the current grade level.

In addition, a category referred to as *Undetermined* is for learners whose *ISTEP*+ scores for English/language arts or mathematics are incomplete. For these students, all or a part of the test was not taken or was considered invalid by the examiner (see Indiana Scale Score).

Indiana Performance Index

The Indiana Performance Index (IPI) is an indication of a student's performance on the individual Essential Skills that are measured by *ISTEP+*. It represents the expected number of items that the student would answer correctly if the student had taken 100 similar items for the specific Essential Skill.

Indiana Scale Score

Student achievement levels relative to the Indiana Academic Standards are reported by *ISTEP*+ scale scores. These three-digit, equal-interval scores are expressed on unique scales by content area (English/language arts and mathematics). *ISTEP*+ scale scores typically will range from about 300 to about 850.

Mean

The mean is the arithmetic average of a group of scores. It is calculated by adding the scores and dividing the sum by the number of scores.

Mean Raw Score

The arithmetic average of the number of items answered correctly by a group of students.

Median

The median is defined as the score below which 50% of the cases fall. The median and the 50th percentile are the same.

National Percentile (NP) Rank

The NP represents the percentage of students in the national norm group that scored below a given student's score. For example, a student whose NP score is 70 scored higher than 70% of the students in the norm group. The 50th NP represents the "national average" at the time the test was normed (i.e., half of the norm group scored below an NP of 50).

Norm Group

A sample of students with defined characteristics. The data obtained from testing this group constitutes the norm to which others can be compared. The *ISTEP*+ norm group is composed of a sample of students representative of the nation in terms of region, community type, ethnicity, grade, and school size.

Glossary

Norm-Referenced Score

A measure provided by a norm-referenced test that relates the test performance of an individual or group to the performance of the norm group.

Norm-Referenced Test

A test that reports students' scores relative to those obtained by a national sample (norm group) of students.

Normal Curve Equivalent (NCE) Score

The NCE was developed to allow mathematical manipulation of NP scores—especially for program evaluation and research requiring the comparison of scores across groups or across time. The NCE scores can be thought of as NP scores rescaled on an equal interval scale (which allows them to be used in mathematical calculations such as deriving a mean score). NCE scores are often converted to the NP scale for direct comparison to the norm group (see NP of MNCE).

Normal Distribution

A term synonymous with the standard normal distribution. The normal distribution (a bell-shaped curve) represents a theoretical frequency distribution of measurements. In a normal distribution, scores are concentrated near the mean and decrease in frequency as the distance from the mean increases.

Norms

The distribution of test scores for members of the norm group.

NP of MNCE

The national percentile of the mean normal curve equivalent is used to mark the arithmetic average of a group of NP scores. Since NP scores cannot technically be added, subtracted, multiplied, or divided, they are first converted to the equal interval NCE scale, an average is calculated, and the average (mean) NCE is then converted back to an NP for interpretation.

Number Correct Scoring

A scoring procedure that involves adding up students' scores on the test questions in a test.

Pattern Scoring

A procedure for assigning students' scale scores that involves considering the pattern of students' scores on the questions in a test as well as certain statistical characteristics of the questions.

Glossary

Quartile

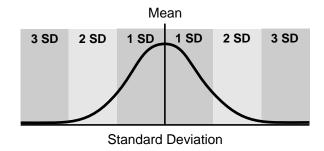
A point in the local distribution of scores. Quartiles are determined by dividing a distribution into quarters at three points: the 75th percentile, the 50th percentile (median), and the 25th percentile. These points are also known as Q3, Q2, and Q1. If the scores of students in the local group produce a normal distribution curve identical to the norm group upon which the test was standardized, 25% of the students would fall into each quarter.

Raw Score

A student's observed score on a test, i.e., the number correct. While raw scores do have some usefulness, they should not be used to make comparisons between performance on different tests, unless other information about the characteristics of the test is known.

Standard Deviation (SD)

A statistic that indicates the amount of variability in a group of scores. When scores are normally distributed (i.e., when they are part of a bell-shaped, "normal" curve), about two-thirds of the scores are within one SD above and below the average (mean) score, and about 95% of scores are within 2 SDs of the mean. In almost any shaped distribution, all scores will be within 5 SDs of the mean score.



Standardized Test

A test administered in accordance with explicit directions for uniform administration.

Test Section

A subtest covering part of a given content area. For example, the test for the mathematics content area might be divided into two test sections or subtests:

1) Mathematics Computation and 2) Mathematics Concepts and Applications.

Sample Letter to Parents

Dear Parent:

This past fall, students in Grades 3, 6, 8, and 10 participated in the Indiana Statewide Testing for Educational Progress (*ISTEP*+). A copy of your child's Student Report is enclosed for your review.

The front of the Student Report shows how your child did on the Indiana Academic Standards. The standards are the required skills that schools must teach to their students. This report shows whether your child passed or did not pass the English and mathematics parts of the test. The report also shows how your child did on each of the English or mathematics skills.

The back of the Student Report shows how your child did on each of the applied skills items. These are the questions that require students to write a paragraph or write the answer to a question instead of simply choosing the answer. Your child's answers to these applied skills items will be available for your inspection at the school in December.

Your child's school is the best source of information if you have questions about your child's *ISTEP*+ scores.

Sincerely,



20 Ryan Ranch Road Monterey, California 93940-5703

Guide to Test Interpretation

